

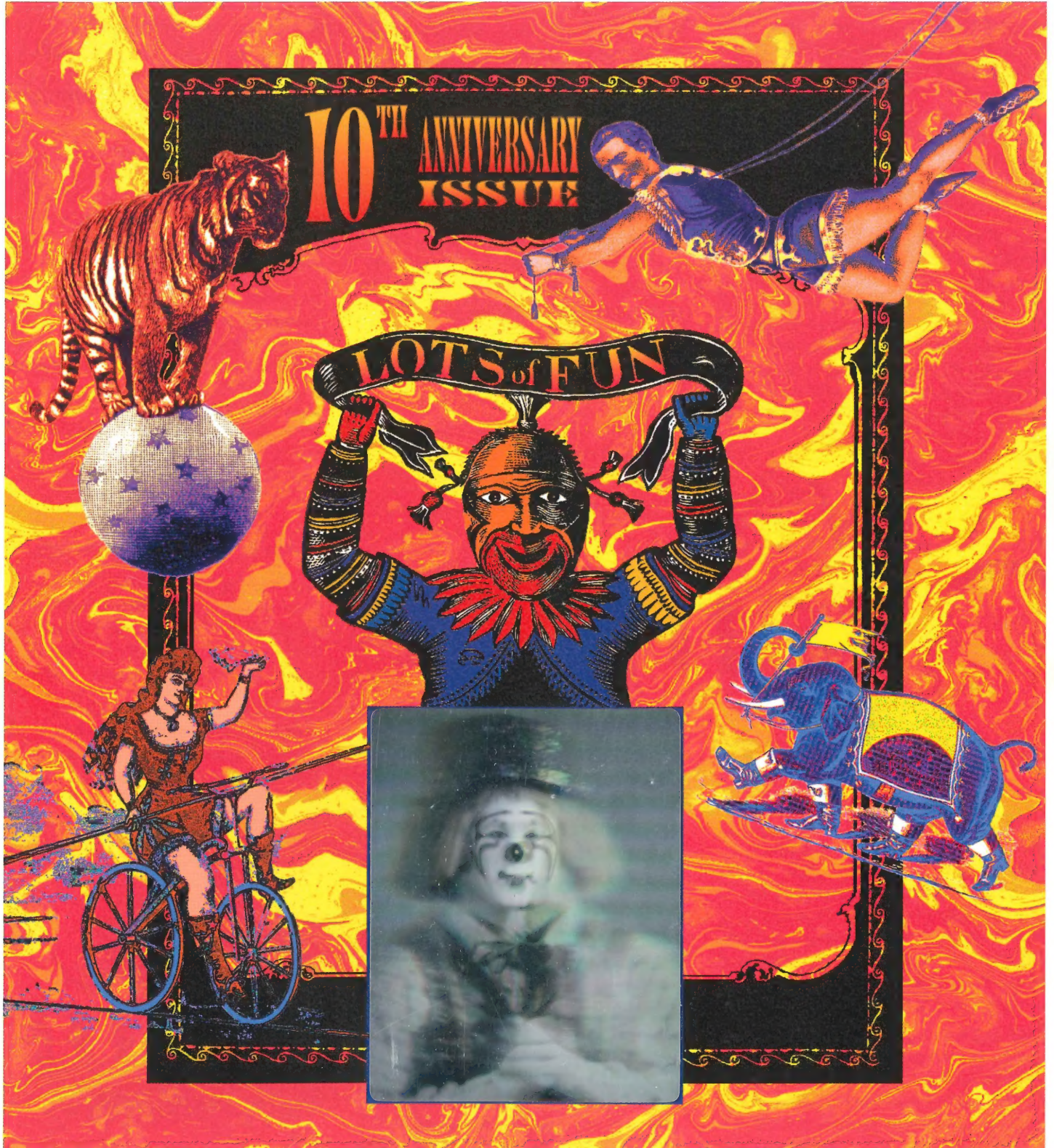
YLEM

Ylem (Eye-lum): The primordial stuff out of which the universe emerged in the Big Bang

Artists Using Science and Technology

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Ylem Newsletter
Vol.11, No. 4 May 1991



Computer art by Diane Fenster

"The Clown" hologram by Sharon McCormack

How Ylem Emerged

by Trudy Myrrh Reagan

An intellectual loneliness settles over artists whose works revolve around an oddball subject like science. I had lots of artist friends, but few who were intrigued by black holes and continental drift. In 1979 the subject of my homework in a grants-writing course was a hypothetical organization of artist-scientists whose non-profit status benefitted the artists in all kinds of ways. But the idea of actually starting a group felt burdensome.

This all changed when I met Howard Pearlmutter in 1980, a computer enthusiast newly arrived from Princeton, NJ, itching to meet all his heroes out on the West Coast. In charge of a meeting at Stanford Medical School of the Homebrew Computer Club in August, Howard gathered like a whirlwind a slew of computer animations from as far away as Russia. The auditorium was packed with nerds and polymaths



who spoke a language new to my ear, computerbabble, and visual-effects groupies like me. I was struck right away by the beauty of the graphics, the ferment surrounding the very new personal computer industry, and an exotic breed of people who felt equally at home with beautiful images from art and from science, computers, and mathematics.

This was the precursor to many high-energy meetings in 1980-81 Howard held that came to be called "Graphics Gatherings." These were always free—at a time when any conference with

About the Cover

To whom do we owe Ylem's tenth anniversary cover? Louis M. Brill came up with the total concept, and contacted American Bank Note, who donated holograms made with their latest technology. Digital Graphics donated prepress services and color printing using high-end equipment. Art by computer artist Diane Fenster and holographer Sharon McCormack graces the cover. We also thank Robin Samelson for securing the services of Digital Graphics, Russell Reagan for the art direction and color "YLEM," and a team of volunteers who stuck holograms on by hand.

Color Printing by Digital Graphics

Our magnificent color spread was the gift of Digital Graphics in Menlo Park, headed by Robert Hu, who has a MFA from San Francisco Art Institute. His firm used our color desktop page layout and art files from the Macintosh. Our art on paper was digitized by a Sharp JX-600 scanner (600 X 600 dots per inch!). Slides were scanned with a Barney Scanner.

Computers now do several operations formerly done photographically, speeding up the prepress work. Then,

the Newsletter was printed on a huge Heidelberg four-color press. It is unusual to have both a digital service bureau and printer in one company. This offers efficient feedback and coordination at every stage.

We were impressed also with their "imagesetting" equipment: Digital Graphics is one of only three companies in the San Francisco Area that has the Afga SelectSet 5000 machine. This does color separations with a much finer laser beam that mechanically moves in a new way to avoid the curious moirés and oval-shaped dots of color that have

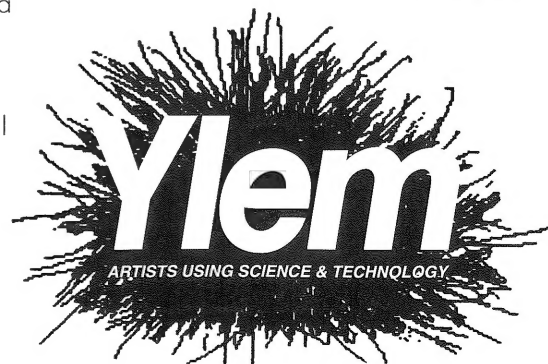
Ylem logos: left by Myrrh, 1981; right by David Healy, 1984

was meeting like Scott Kim, whose *Inversions* book was still in notebook form, and having great fun. I looked up Ylem in a giant dictionary and learned how it was really pronounced, (eye-lum).

I don't know how I finally took the plunge to have an actual meeting. I found a free room at Palo Alto's Junior Museum on February 21, 1981 to discuss what an Ylem organization could offer artists, and competing with noisy children in the other room were

Continued on page 4

"computer" in the name cost megabucks. (The tradition lives on in the Digital Valentine's Parties he holds yearly in Northern California). I confided to him in October 1980 my fantasy of having a group of my own focused more on the visual arts than computer technology. Ylem was what I called it—a wonderful word that kept popping up in books I was reading about my husband's specialty, physics. (The word, not much used now, was "in the air" then. I've just learned that a Japanese electronic multi-media rock group was also calling itself Ylem in 1980). Howard prodded me to pass around signup sheets at his meetings. I recruited also at polyhedral puzzle parties organized by Stan Isaacs. A group of us met weekly for a few months in Stan's polyhedra-encrusted apartment to discuss Gödel, Escher, Bach by Douglas Hofstadter. I was surfing on the energy of the people I





marred most earlier digital four-color halftone work. —T.M. Reagan

For information: **Digital Graphics**,
3527 Haven Ave., Menlo Park, CA
94025; (415) 306-0770;
FAX (415) 369-2297

Holographer Sharon McCormack

Holography's attributes of depth, parallax, greater light reflectivity and color are constantly being improved. Embossed foil has reached a new dimension with the introduction of a full "natural color" stereogram process. In "The Clown" the holographic artist Sharon McCormack and American Bank Note Holographics have produced an intriguing 3-D stereogram that shows the full-color capabilities of holographic printing.

McCormack's holography expertise goes back to the pioneering days when stereograms were known as multiplexes, 9-inch cylindrical display units with a self-contained light projecting a moving image in the middle of the cylinder. Since McCormack's early days at the Multiplex Company and the San Francisco School of Holography she has developed holographic display techniques using state-of-the-art image clarity with color enhancements, and processes in computer animation. Images with a unique theatrical content have become McCormack's trademark. She has summarized her creative style by observing, "When it comes to thinking about holograms in a pure sense, I'm still very much in awe of them as when I first started. It's as close as one could come to making magic."

Her images, besides being technically perfect, are also fun to look at. For instance, as The Clown appears to offer a flower, it suddenly goes limp, causing the happy smile on his face to be replaced with a frown. A careful look at the Clown reveals a wide spectrum of natural color throughout the Clown, from his white face and red lips to the colored strips on his vest and his yellow hair. "The Clown" is a tribute to the new breakthroughs in animated stereograms with full-color imaging.

McCormack successfully transfers live scenes into movie images and from that format, extends it into a holographic image. That image is further converted into an embossed foil printing "master" with full-color rendering that replicates it as an embossed foil. The Clown was produced as a stock image for American Bank Note Holographics, well known for its Visa and MasterCard hologram imprints. Who knows, perhaps one day a McCormack trademark image may grace these little plastic cards, with some novel cheerful image to ease the financial burden of spending close to the card's financial limits. —Louis M. Brill

American Bank Note initially donated 300 holograms; later, Digital Graphics offered to print 500 newsletters. Therefore, not all copies of this issue have holograms. "The Clown" hologram was one of the pictures that Diane Fenster scanned and altered, as she describes in her article on this page. It appears where the hologram would have appeared on copies without the hologram.

"The Clown", created by Sharon McCormack. To commission original work, FAX (503) 386-4636. Produced by American Bank Note Holographics. For information on their mass production techniques, call (914) 592-2355.

Lack of space prevents an explanation of the full-color embossed foil process. Refer to the New York Museum of Holography's newsletter, Holosphere, issues Summer and Fall, 1989. NY MOH (212) 925-0581.

Computer Artist Diane Fenster Writes of her Work:

All right, I confess. I'm a woman in love with a computer. I've become a modern-day alchemist using silicon to transform base electrical patterns into art. And to think that just six years ago I had computer fear, believed computers were evil machines that would destroy a person's soul. But I did manage to learn how to use the Mac (a Mac Plus, top of the line at the time), primarily as a graphic arts tool to augment my job capabilities as graphic

Page header: computer art by Russell Reagan

artist for the School of Science at San Francisco State University.

Before coming to SFSU, I had been working with performance artists as a silkscreen artist, creating collage images to be used as backdrops for the performances and as posters. My collage work reflected my interest in both the Dada and Surrealist art movements, primarily in the juxtaposition of seemingly unrelated visual elements.

There is an odd contradiction in my current pieces in that I am attempting to create "mythic images" which relate both to the collective unconscious and the personal process of individuation while using advanced industrial technology. I am hoping to move beyond some of the current hard-edged approaches to computer graphics and to present a world where the borders are not so well defined. Here is where the technology excels, in providing me with a way of crafting dreamlike sequences that seemingly float into each other, overlap and merge, reflecting the inner processes I am attempting to portray.

The computer does not destroy your soul as I once thought but rather has liberated a creative aspect of the self which might have otherwise remain undiscovered.

On the cover all the separate circus images I had found were scanned on the Apple scanner in shades of grey (except for the black picture border, line art done with Applescan). Each piece was brought in as a TIFF file to Color Studio where color values replaced the grays. Some touch-up was required using computer paint program tools. The pieces were then brought into Photoshop, sized and rotated. In some cases filter functions were applied. Then the image was built up, layer by layer. The "10th anniversary" text was added last using the text tool. Each word was created separately and a graduated fill was added. The text was stretched and positioned while still selected.

—Diane Fenster

How Ylem Emerged, *continued from p. 2*

Bob Ishi, Howard Pearlmuter, Scott Kim and Dave Dameron showing off their work. They're still members. Among the other 15 people were my son Russell, who now does the



"Medieval Figures" computer art by Luz Bueno

graphic design for the *Ylem Newsletter*, and Carl Rosendahl and Glenn Entis, who went on to found Pacific Data Images, a prominent computer animation company.

Bob Ishi added "Artists Using Science and Technology" to our name while doing our second newsletter.

We held our first forum on a pretty day in May, 1981 at San Francisco's Fort Mason. A few kindred spirits had encouraged me before 1981, and two spoke to us on this occasion: Carrie Adell, whose jewelry used tetrahedra in new ways, and Walter Zawojski, whose airbrush paintings were inspired by cosmic vibrations. Judith Wasserman presented etchings of imaginary constellations. Dale Seymour, who started Creative Publications, showed how the Golden Section can generate designs. Then, of all things, Nelson van Judah told how he designed playgrounds. Sculptor Ruth Asawa attended, and mentioned the big geometric structures she made with kids out of milk cartons. On this occasion people first paid dues as well. I really had to bite the bullet to ask for their five dollars. It felt very unfamiliar, but producing a newsletter was costing me money.

Eleanor Kent appeared at our next forum, and shortly thereafter organized our First Annual (though we didn't know it then) Computer Graphics Tour. At our first business meeting in August '82 at Jerome Kirk's studio Louis Brill

showed up and proposed a member directory—a project we finally implemented in 1988. Joe Villareal taught me to use the computer to create an Ylem database. Our first foreign member was Julian Rowan of Canada. I was shocked to find how far news of us had travelled in just a year. The response to Ylem, which I had visualized as a small, local discussion group, showed that artist/scientist/technologists from many places felt isolated like me and needed a network. It was time to try for non-profit status. Pro bono lawyer Aileen Lee helped us with our application.

Until 1988 our forums were held at various locations such as Stanford, California College of Arts and Crafts and San Francisco State University. Often people brought their own art and gadgetry to share, a practice we're trying to revive. Because I was in charge, the act I remember best was Steve Gill, the guy with the



Fused dichroic glass by Zoe Adell

giant chemistry set. I had asked him to show us his glowing chemoluminescent compounds, but he went on to make smoke bombs that I was afraid would set off the fire sprinklers. When I suggested he wrap it up he proposed instead that we go outside. What was next? Small rockets!

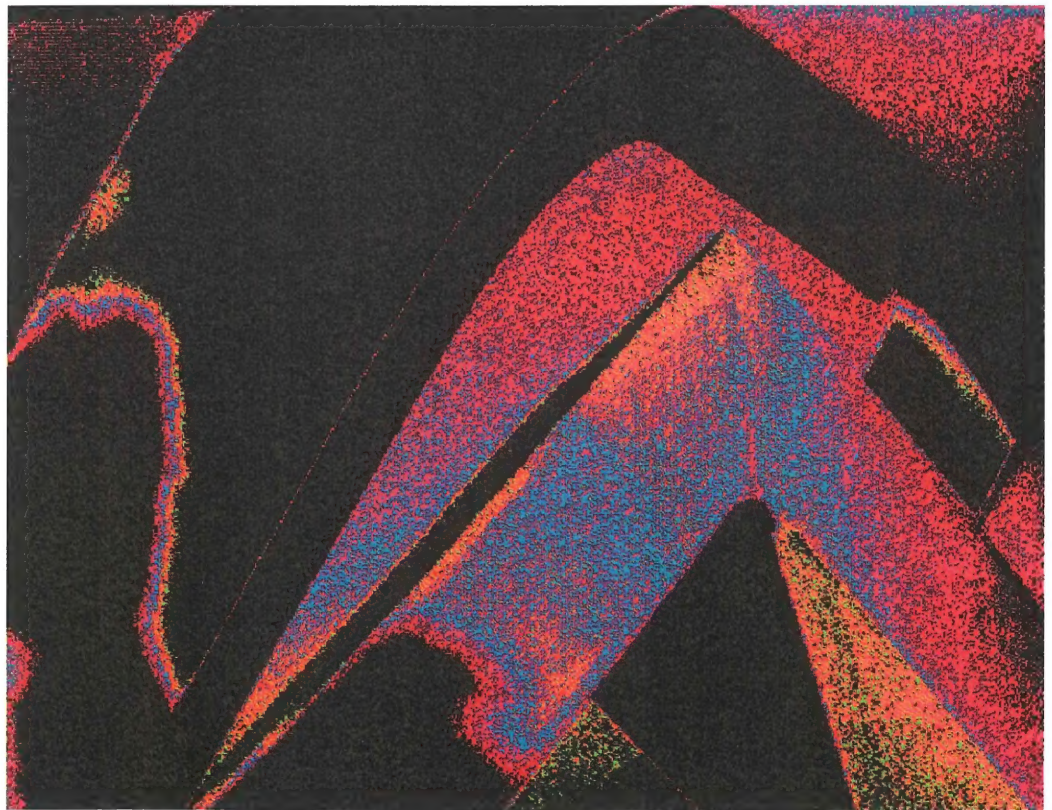
We passed two other milestones in those early years. In 1984 our newsletter became professional-looking with the help of editor Mark Burstein and graphic designer David Healy. Typesetting it was an arduous task that involved David retyping *everything* into a machine at the typesetter's. Rumors of desktop publishing tantalized us like distant lightning. Finally, in July, 1985 David desktop-published our first issue on a little Macintosh that ran out of memory every 15 minutes. He was a beta tester for PageMaker and got bitten by all the bugs.

The other milestone came in 1985 when Ylem grew too large for me to manage together with a family, aging parents, and an art

another, more renowned and experienced group (ISAST) in the same field here has given Ylem a big boost, as has The Exploratorium's keen interest in the arts. Both organizations are very helpful to us. Exploratorium physicist Larry Shaw has done more than half the work on every forum since 1988.

Ken Jenkins donated many hours of his expertise on two Ylem video projects, and initiated me into the mysteries of video production. Most of you know of the 1989 half-hour show about us for cable TV but few know that a 1985 a ten-minute tape based on members' slides called *Five Aspects of Computer Art* preceded it. Jospha Haveman (who produced the Newsletter in 1989), and Lucia Grossberger got me up-and-running in desktop publishing and computer graphics.

I finally found colleagues working on projects similar to my own—in several countries! Not only that, technologies I never



Computer art by Bill Henderson

career. Until Beverly Reiser consented to be president, and architect Fred Stitt to help us handle the business end of it from his office in Orinda, Ylem's survival was truly in doubt. We experimented: Fred tried to push us into the big leagues by turning the *Ylem Newsletter* into the *Ylem Journal*, a 20-page publication that after four issues proved too difficult. Meanwhile, Beverly published 36 monthly calendars for us.

As I write this I realize how many people have helped to start Ylem and keep it going, and wish to thank them all. Upon the death of Frank Malina, founder of the journal *Leonardo* in England, his son Roger decided to continue it in 1983. It was a pure stroke of luck for us that he lived in the Bay Area. Having

heard of and fascinating artists using them crossed my path. Instances abound where members helped each other to move into new technologies. While this is one of Ylem's reasons for being, we have tried to keep the field of discussion from being bogged down in technique. I continually ask, "What are the ideas imbedded in the technique and research? Where are they taking us?" As new fields have opened up in, say, Chaos theory, we have been blessed with researchers eager to give presentations. Labs and studios have opened their doors to us. I want to thank them all, and the helpers that have made the work involved positively jolly. I hope others have found the sense of community that I have and are no longer lonely.

YLEM GALLERY

Events

April 25 - May 6

The Festival of Animation 1991

Pure Imagination at play. Admission: \$6 advance tickets, \$6.50 at door. **Wheeler Auditorium, UC Berkeley.** Call for times (415) 642-7511

April 28, 2-8 pm

Artists for The Environment Benefit Sale

Electric painting demonstrations by Dave Archer at 3, 5 and 7 pm. (These involve lightning bolts from giant Tesla coils. Spectacular!) To Benefit The Marin Humane Society in support of Citizens Against Buck Center. Show of art for sale by Dave Archer, George Summerand Jacquie Marie Vaux. Acoustic entertainment by Grace Slick with David Jenkins, Lorin Rowan and guests. **Dave Archer's Studio, 56-A Hamilton Drive, Ignacio (Marin County), Bel Marin Keys Industrial Park; (415) 925-1311**

May 15-19

National Educational Film & Video Festival

Brings together makers of exciting instructional films and distributors. Seminars on techniques like multimedia, and how to market the result. Seminar package: \$200; "Festival Pass": \$35; tickets for seminars, and screenings on May 19, 25, 27 at both Oakland Museum and Exploratorium in San Francisco are available separately as well. **Deadline to register May 8.** Registration: **NEFV Festival, 655 13th St., Oakland, CA 94612; (415) 465-6885**

May 19, Noon - 6 pm

Ylem 10th Anniversary Celebration

Please see page 8 for details.

Exhibits

Through May 19

Artists and Light (Reims, France)

International exhibit at the **Centre National Art et Technologie, 1 Rue Eugene Wiet, BP 1183, 51057 Reims, France; phone 33 26 82 49 49**

Through June 2

Bill Culbert

A European-based artist known for his work with light, exploits the relationships between light, optical illusion, shadow and reflection. Culbert uses light in both senses of the word: he lightens more obviously solid matter, reducing its opacity, weight and gravity. He uses light to metamorphose practical objects into abstract forms. He lays bare what is unusual in the manifestations of natural things.

All Events and Exhibits occur in the San Francisco area unless otherwise stated.

May 22, 8 pm

Now You See It, Now You Don't

Ylem forum on illusion. Please see page 8 for details.

June 3-5

The New Designer: Computer Graphics for Design (New York City)

Topics include: Design, Production, Designs for desktop color, Electronic illustration, Designing for Multimedia. Structuring the Corporate Electronic Design Office. Fee: \$185-\$755. Info: **Computer Graphics for Design, 45 Stephenson Terrace, Briarcliff Manor, NY 10510**

September 25-29

International Festival of 3-D (Paris)

The 8th ISU World Congress will be the main part of a larger event, "The International Festival of 3-D Images" which will include, besides the ISU World Congress, the 1st International Symposium on 3-D Images, the 1st Standardization Conference for 3-D Images and an exhibition devoted to 3-D images. The 8th ISU World Congress, is essentially reserved for ISU members, will offer the following traditional activities: projection of stereo slides, two international competitions, workshops, tours, festival exhibition, technical and cultural exhibition, old and modern 3-D images, products and techniques, and stereoscopic antique fair. Info: **Guy Ventouillac, ISU Congress Manager, 2 allée du Roule, 94260 Fresnes, France. Phone: +33 1 42 37 10 42.** Update information: **ISU Secretary, Judy Fentress, CH-3183 Albligen, Switzerland; phone: +41 (31) 741-1653, +41 (1) 850- 62- 23. e-mail: tentress % skyway.enet.dec.com**

When a work has reached that point of transmutation, he considers it to be "charged," like a battery. The work can then in turn, "charge" its viewers. **Exploratorium, 3601 Lyon St, San Francisco; (415) 563-7337**

Through June 23

The Third Dimension and Beyond

Multidimensional work done with the aid of the computer. 25 international artists include Ylem members Milton Komisar, Marjorie Franklin and Beverly Reiser. **The Bronx Museum, Grand Concourse, The Bronx, NY 10456; (212) 681-6181**

Opportunities

Deadline ASAP

Burn Time

This will be an "art event focusing on global atmospheric degradation punctuated by a 5-day series of participatory visual and audio exchanges between the sponsoring galleries: District of Columbia Art Center in Washington, DC and the George Frazer Gallery in Auckland, New Zealand using mail, telephone, and fax transmissions. We are looking for artists who work in all areas and media to participate on-site and via fax." The installations will be on view in both galleries through the end of June. **Charles Flickinger and Cheryl Casteen, 3914 Harvard St, Silver Springs, MD 20906; (301) 933-0092**

Deadline May 1

National Art Review

Open to US artists. All media. "An exhibition surveying contemporary art—the established, the emerging, the traditional, the unconventional." \$5 / 6-12 slides. Show in Jan. to feature 4-6 artists. Insurance, shipping of exhibited work will be paid. **Director, Sawhill Gallery, Art Dept., James Madison Univ., Harrisonburg, VA 22807; (703) 568-6407**

Deadline May 7

Beyond Photography

Open to US artists. Work using photographic techniques, "i.e. mixed media, altered or manipulated photography, hand colored, photosculture, xerography, etc. Straight B&W or color photos not eligible." \$22 / 3 slides, \$5/each additional, max. 10. Show Aug. 3 - Sept. 1, some works will tour TX. Catalog to be produced. **Texas Fine Arts Assoc., 3809-B W. 35th St., Austin, TX 78703; (512) 453-5312**

Deadline May 15

Prix Ars Electronica 1991, Interactive Art (Linz, Austria)

In collaboration with ISAST, Prix Ars Electronica has added a new award category for interactive artworks in which the computer plays a significant role in making the interaction between the viewer and the artwork a significant aesthetic element. Computer graphics, computer music, computer animation; as well as environments, installations, animations, hypermedia, performances, visual music, etc. may be submitted. Submit entries on videotape with accompanying texts. Awards: \$25,000 for computer animation, \$12,500 for the other categories. For prospectus contact: **ORF Prix Ars Electronica, Frankstraße 3a, A-4010 Linz, Austria**

Some items in *Opportunities* reprinted from *Art Calendar* (the monthly marketing and career management journal for artists, PO Box 1040 Great Falls, VA 22066, Subscriptions \$29/yr.)

What Is Ylem, Really?

Like "atoms," the concept of "ylem" had to come from somewhere. I first saw it mentioned in John Wheeler's tome, *Gravitation*. This book was written in mathematics which I can't read, but had informative sidebars in English. In *The Red Limit*, my imagination was further inflamed with ylem by science writer Timothy Ferris. But I'm sure that George Gamow, who made ylem a household word to cosmologists, had first encountered it in classical Greek texts.



George Gamow: His friends R. Alpher and R. Herman slipped this montage into his slide lecture as a joke (from *My World Line* by G. Gamow, Viking Press, 1970), (retouched)

Opportunities, continued

Deadline May 15

Lyn Blumenthal Grants

Grants, \$1,000 - 3,000 each, to fund video and video criticism projects. Theme: The Unlegislated Body. Especially encouraged are projects using small-format media technology in innovative ways. **Lyn Blumenthal Memorial Fund, PO Box 3514, Church St. Station, New York, NY 10007**

Those of you who have always been curious about this, read on...

—Trudy Myrrh Reagan

From Newton's Laws to Einstein's Theory of Relativity by Fang Lizhi and Chu Yaoquan, World Scientific, 1987:

When we recall the scientific progress from Aristotle to Newton and then to Einstein, it seems that we identify a persistent drive of the physical science: it ever endeavors to find unified law that governs diverse processes, and a unified origin out of which all types of matter were born.

A long time ago Aristotle proposed that our multifarious world originated from a single substance which he called *ylem*. This, however, is only a philosophical conjecture. The first unity in the scientific sense was the gravitational law discovered by Newton, a law that governs the motion of not only celestial objects but also of falling objects near the surface of the earth. This we have already mentioned in the first chapter.

The second leap forward was completed in the nineteenth century by J. Maxwell who established the electromagnetic theory, thus attaining a unity of electric, magnetic and optical phenomena.

After founding the special and general theories of relativity, Einstein expended all the energy of the remaining half of his life seeking the unity of the gravitation and electromagnetism.

Deadline May 31

10th Annual September Competition

Awards. Open to all artists 18+. All media. \$15 / up to 2 entries; slides if 2 or 3-D media, videos if film/video or experimental media. Show Sept. 7-Nov. 9. **September Competition, Alexandria Museum of Art, PO Box 1028, Alexandria, LA 71309-1028; (318) 443-3458**

Database

Program for Art on Film maintains an information service/computer database for films/videos on the visual arts. Put them on your mailing list to receive notices of new releases, and to inform them of your new work. **Program for Art on Film, 980 Madison Ave., New York, NY 10021; (212) 988-4876**

From The Red Limit: The Search for the Edge of the Universe by Timothy Ferris (William Morrow and Co., 1977):

[George] Gamow had studied under Friedmann, the mathematician who suggested that the universe should be expanding. Gamow was twenty-six years old when Hubble discovered the redshift-distance relationship. In 1934, while Eddington was calling attention to the connection between Hubble's observations and Lemaitre's theory, Gamow arrived at George Washington University, where he was to formulate a new version of Lemaitre's cosmology. He had begun thinking of atoms as artifacts of creation....To his mind the cosmic abundance curve suggested the results of a gigantic explosion, like a thermonuclear bomb. Or the Big Bang....Gamow began to think that if he could reconstruct the conditions under which the elements formed in their observed abundances, he might learn what the universe was like in the first moments after creation. "The relative abundances of various atomic species," He wrote, "...must represent the most ancient archeological document pertaining to the history of the universe." The question was how to read the document.

During the war Gamow was a part-time consultant to the Applied Physics Laboratory of Johns Hopkins. There he met a graduate student, Ralph Alpher, who had just abandoned the subject of his doctoral thesis when a physicist at another school beat him to the result. Casting around for a fresh area of study, Alpher came across a paper that aroused his curiosity. Donald Hughes of the Brookhaven National Laboratory had measured a quantity called the neutron-capture cross-section for a variety of atoms, and found that this quantity increased sharply throughout the first half of the periodic table of the elements, then flattened out, like an inverted version of the cosmic curve. Neutron capture therefore might have something to do with the way elements were formed in the Big Bang. It might serve as a way to understand the cosmic abundances.

Continued on next page.

What Is Ylem, Really?

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The product of this line of thought, a brash paper attempting to reconstruct events in the fireball of creation, appeared in a 1948 issue of *Physical Review*—on April Fool's Day, to Gamow's delight. Hans Bethe at Cornell was surprised to find himself listed with Alpher and Gamow as an author of the paper, which he had not worked on; Gamow had added Bethe's name because he thought it would be nice to have a paper on genesis written by three whose names began with Alpha, Beta, and Gamma, the first three letters of the Greek alphabet....

The Alpher-Bethe-Gamow theory, like Lemaitre's, described the universe as beginning in a highly compressed state, but while Lemaitre's "primeval atom" was made of densely packed matter, Gamow's was composed of almost pure energy with only trace elements of matter. Lemaitre's model resembled nuclear fission, the basis for the atomic bomb; Gamow took his from nuclear fusion, the hydrogen bomb. "One should imagine the original state of matter as a very dense over-heated neutron gas," Gamow wrote. He called this stuff Ylem, after the ancient Greek term for the chaos out of which the world was born.

Ylem 10th Anniversary Celebration

At Walter Alter's studio,
4001 San Leandro St. #26, Oakland
Sunday, May 19, noon-6 pm

Here's a chance to really get acquainted with each other, connect the faces with the work by seeing slides and videos, play with exotic toys, and feast. See Walter's electronic works.

Please bring: potluck food/beverage; slides/videos of your work; toys/amazing oddities. RSVP to get directions and suggestions for food to bring: **Walter, (415) 532-7057**



"Bateleur" cast bronze by Bruce Beasley

Ylem Exploratorium Tur & Forum, "Now You See It, Now You Don't"

In and around the McBean Theatre, The Exploratorium, 3601 Lyon St., San Francisco

Wednesday, May 22 (free night at the museum, 6-9 pm)

Bonus Tour, 7-8 pm

(If you come late, pick up tour map at Ylem table near the door): Bill Culbert's installations based on strange light effects, and permanent museum exhibits that exploit illusions such as the Adelbert Ames Room.

Forum Program, 8-10 pm

Magician **Hugh Macdonald** will be Master of Ceremonies.

"Illusions Needed in Flight Simulators" by a NASA designer from Ames Research, Mountain View

"Developing Affordable Virtual Reality": Eric Gullichsen from Sense8, Inc.

Videos and films about M.C. Escher: "Infinite Escher" (Sony video starring Sean Ono Lennon), "Symmetry Test II" and "Adventures in Perceptions"; plus two that show illusions: "2-Space" by **Larry Cuba**, and a video of strange effects by **Ned Kahn** of the Exploratorium.

Art Displays: Illusionary etchings by **Elaine Rothwell**, "Inversions" software demo by **Scott Kim**, and Holograms from the **Holography Institute**. Info: **Trudy (415) 856-9593**

Please send a
membership
application and
sample newsletter
to (me) (my
friends) at:

NAME _____

ADDRESS _____

☐ Sample issue &
application only (free) ☐ I enclose \$ _____ for membership (see above)

Yearly membership rates:

U.S. Individual \$30
U.S. Institution \$45
U.S. Student or Senior \$20

Canada/Mexico add 5 US\$ to U.S.

rates; all other countries add 15 US\$ to U.S. rates.

Membership includes 12 issues of the *Ylem Newsletter* and listing in the *Artists Using Science and Technology Directory* which you will receive in the Autumn.

Send to:

**Ylem, PO Box 749,
Orinda, CA 95463**